Claims

We claim:

1   1. A graphic multi-user interface for resolving conflicts, comprising:

2   a touch sensitive surface;

3   means for displaying a plurality of items on the touch sensitive

4   surface;

5   means for generating a plurality of sequences of touch samples when

6   a plurality of users simultaneously touch the touch sensitive surface, each

7   sequence of samples being identified with a particular user generating the

8   sequence of samples;

9   means for associating each sequence of samples with a particular

10   item, the particular item having an associated state and a policy;

11   generating an event for each associated sequence of samples; and

12   means for determining a decision with respect to a conflict affecting a

13   next state of the particular item according to the events from the plurality of

14   users, the state and the policy.

1   2. The graphic multi-user interface of claim 1, in which the state of the item

2   includes an owner, an access code, a size, an orientation, a color and a

3   display location.

1   3. The graphic multi-user interface of claim 1, in which the particular item is

2   active when a particular user is touching the particular item.

1   4. The graphic multi-user interface of claim 1, in which one particular user

2   generates multiple sequences of sample for multiple touches.

1   5. The graphic multi-user interface of claim 1, in which each sample

2   includes a user ID, a time, a location, an area and a signal intensity of the

3   touch.

1   6. The graphic multi-user interface of claim 5, in which each sample

2   includes a speed and trajectory of the touch.

1   7. The graphic multi-user interface of claim 1, in which the policy is global

2   when the conflicts affects an application as a whole.

1   8. The graphic multi-user interface of claim 1, in which the policy is element

2   when the conflicts affects a particular item.

1   9. The graphic multi-user interface of claim 1, in which the policy is

2   privileged user depending on privilege levels of the plurality of users.

1   10. The graphic multi-user interface of claim 1, in which each user has an

2   associated rank and the decision is based on the ranks of the plurality of

3   users.

1   11. The graphic multi-user interface of claim 1, in which the policy is based

2   on a votes made by the plurality of users.

1   12. The graphic multi-user interface of claim 1, in which the policy is

2   release, and the decision is based on a last user touching the particular item.

1   13. The graphic multi-user interface of claim 1, in which the decision is

2   based on an orientation of the particular item.

1   14. The graphic multi-user interface of claim 1, in which the decision is

2   based on a location of the particular item.

1   15. The graphic multi-user interface of claim 1, in which the decision is

2   based on a size of the particular item.

1   16. The graphic multi-user interface of claim 1, further comprising:

2   means for displaying an explanatory message related to the decision.

1   17. The graphic multi-user interface of claim 1, in which the decision is

2   based on a speed of the events.

1   18. The graphic multi-user interface of claim 1, in which the decision is

2   based on an area of the events.

1   19. The graphic multi-user interface of claim 1, in which the decision is

2   based on a signal intensity of the events.

1   20. The graphic multi-user interface of claim 1, in which the decision tears

2   the particular item into multiple parts.

1   21. The graphic multi-user interface of claim 1, in which the decision

2   duplicates the particular item.

1   22. The graphic multi-user interface of claim 7, in which the application has

2   a global state, and further comprising:

3   allowing a change to the global state only if all times are inactive, no

4   users are touching the touch sensitive surface or any of the plurality of items.

1   23. A method for resolving conflicts with a graphic multi-user interface,

2   comprising:

3   displaying a plurality of items on a touch sensitive surface;

4   generating a plurality of sequences of touch samples when a plurality

5   of users simultaneously touch the touch sensitive surface, each sequence of

6   samples being identified with a particular user generating the sequence of

7   samples;

8   associating each sequence of samples with a particular item, the

9   particular item having an associated state and a policy;

10   generating an event for each associated sequence of samples; and

11   determining a decision with respect to a conflict affecting a next state

12   of the particular item according to the events from the plurality of users, the

13   state and the policy.